III. CLAIM AMENDMENTS

1. (Previously Presented) A method in a transmitter for interleaving information bits from a data block into transmission bursts, each of the information bits being assigned with an index, the interleaving comprising

determining if modification of the values of the indexes is required by determining if $\frac{K}{2} \bmod D = 0$, wherein K is the size of the data block given in bits, and D is the interleaving depth given as the number of bursts,

computing positions of the information bits in the transmission bursts such that the values of the indexes of at least a portion of the information bits are modified by means of a shift term $s = \mathrm{int}\left[\frac{k}{K/2}\right]$, wherein k is the value of the index of the information bit.

2. (Cancelled)

3. (Previously Presented) The method as claimed in claim 1, wherein each information bit to be included in one of the transmission bursts is provided with an index number, and the sum of the index number of each information bit and the shift term s forms the modified value of the index of said information bit

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Previously Presented) The method as claimed in claim 1, comprising transmitting the information bits in a GSM/EDGE radio access network.

8. (Previously Presented) A method in a receiver for de-interleaving information bits from received transmission bursts, each of the information bits being assigned with an index, the de-interleaving comprising:

determining if the value of any of the indexes has been modified before transmission of the transmission bursts by determining if

$\frac{K}{2} \bmod D = 0$, wherein K is the size of the data block given

in bits, and D is the interleaving depth given as the number of bursts; and

if $\frac{K}{2} \bmod D = 0$, de-interleaving the information bits based on modified values of the indexes, said modification of the indexes being based on a shift term $s = \mathrm{int}\left[\frac{k}{K/2}\right]$, wherein k is the value of the index of the information bit.

9. (Previously Presented) A transmitter comprising an interleaver configured to interleave information bits from a data block into transmission bursts, each of the information bits being assigned with an index, to determine if modification of the values of the indexes is required by determining if $\frac{K}{2} \bmod D = 0$, wherein K is the size of the data block given in bits, and D is the interleaving depth given as the

number of bursts, and to compute positions of the information bits in the transmission bursts such that the values of the indexes of at least a portion of the information bits are modified by means of a shift term $s = \mathrm{int}\left[\frac{k}{K/2}\right]$, wherein k is the value of the index of the information bit.

10. (Previously Presented) A receiver comprising a de-interleaver configured to de-interleave information bits from received transmission bursts, each of the information bits being assigned with an index, to determine if the value of any of the indexes has been modified before transmission of the transmission bursts by determining if $\frac{K}{2} \bmod D = 0$, wherein K is the size of the data block given in bits, and D is the interleaving depth given as the number of bursts; and in response to determination that $\frac{K}{2} \bmod D = 0$ to de-interleave the information bits based on modified values of the indexes, said modification of the indexes being based on a shift term $s = \mathrm{int}\left[\frac{k}{K/2}\right]$, wherein k is the value of the index of the information bit.

11. (Previously Presented) The method as claimed in claim 1, comprising transmitting the information bits from one of a base station and a mobile station of a mobile communication system.

12. (Previously Presented) The method as claimed in claim 1, comprising transmitting the information bits based on at least one of time division multiple access (TDMA), code division multiple access (CDMA), frequency division multiple access (FDMA), and space division multiple access (SDMA).

13. (Previously Presented) The method as claimed in claim 8, comprising receiving the information bits in one of a base station and a mobile station of a mobile communication system.

14. (Previously Presented) The method as claimed in claim 8, wherein each information bit included in a transmission burst is provided with an index number, and the modified value of the index of said information bit equals with the sum of the index number of each information bit and the shift term s.

15. (Previously Presented) The method as claimed in claim 8, comprising receiving the information bits based on at least one of time division multiple access (TDMA), code division multiple access (CDMA), frequency division multiple access (FDMA), and space division multiple access (SDMA).

16. (Previously Presented) The method as claimed in claim 8, comprising receiving the information bits in a GSM/EDGE radio access network.

17. (Previously Presented) The transmitter as claimed in claim 9, configured to be provided in one of a base station and a mobile station of a mobile communication system.

18. (Previously Presented) The transmitter as claimed in claim 9, wherein the modified value of the index of each information bit equals with the sum of the index of said each information bit and the shift term s.

19. (Previously Presented) The receiver as claimed in claim 10, configured to be provided in one of a base station and a mobile station of a mobile communication system.

20. (Currently Amended) The ~~transmitter~~ receiver as claimed in claim 10, wherein the modified value of the index of each information bit equals with the sum of the index of said each information bit and the shift term s.

21. (Previously Presented) An apparatus configured to interleave information bits from a data block into transmission bursts, each of the information bits being assigned with an index, to determine if modification of the values of the indexes is required by determining if $\frac{K}{2} \bmod D = 0$, wherein K is the size of the data block given in bits, and D is the interleaving depth given as the number of bursts, and to compute positions of the information bits in the transmission bursts such that the values of the indexes of at least a portion of the information bits are modified by means of a shift term $s = \mathrm{int}\left[\frac{k}{K/2}\right]$, wherein k is the value of the index of the information bit.

22. (Previously Presented) The apparatus as claimed in claim 21, configured to be provided in one of a base station and a mobile station of a mobile communication system.

23. (Previously Presented) The apparatus as claimed in claim 21, wherein the modified value of the index of each information bit equals with the sum of the index of said each information bit and the shift term s.

24. (Previously Presented) The apparatus as claimed in claim 21, configured for use in association with a transmitter for transmitting information bits based on at least one of time division multiple access (TDMA), code division multiple access (CDMA), frequency division multiple access (FDMA), and space division multiple access (SDMA).

25. (Previously Presented) The apparatus as claimed in claim 21, configured for use in association with a transmitter for a GSM/EDGE radio access network.

26. (Previously Presented) An apparatus configured to de-interleave information bits from transmission bursts, each of the information bits being assigned with an index, to determine if the value of any of the indexes has been modified before transmission of the transmission bursts by determining if $\frac{K}{2} \bmod D = 0$, wherein K is the size of the data block given in bits, and D is the interleaving depth given as the number of bursts, and in response to determination that $\frac{K}{2} \bmod D = 0$ to de-interleave information bits based on modified values of the indexes, said modification of the indexes being based on a shift term $s = \text{int}\left[\frac{k}{K/2}\right]$, wherein k is the value of the index of the information bit.

27. (Previously Presented) The apparatus as claimed in claim 26, configured to be provided in one of a base station and a mobile station of a mobile communication system.

28. (Previously Presented) The apparatus as claimed in claim 26, wherein the modified value of the index of each information bit equals with the sum of the index of said each information bit and the shift term s.

29. (Previously Presented) The apparatus as claimed in claim 26, configured for use in association with a receiver configured to receive information bits based on at least one of time division multiple access (TDMA), code division multiple access (CDMA), frequency division multiple access (FDMA), and space division multiple access (SDMA).

30. (Previously Presented) The apparatus as claimed in claim 29, configured for use in association with a receiver for a GSM/EDGE radio access network.